

State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
101 S. Webster Street
Box 7921
Madison WI 53707-7921

Tony Evers, Governor
Telephone 608-266-2621
Toll Free 1-888-936-7463
TTY Access via relay - 711



Ms. Tera Fong, Director, Water Division
U.S. EPA Region 5
77 West Jackson Blvd., W-15J
Chicago, IL 60604

Subject: Request for Approval of a Variance from Water Quality Standards for Chloride
Receiving Stream: Brighton Creek in Des Plaines River Watershed in Kenosha County
Permittee: Village of Paddock Lake - WPDES Permit No. 0025062-11-0

Dear Ms. Fong:

In accordance with s. 283.15, Wis. Stats., and 40 CFR 131, the Wisconsin Department of Natural Resources (hereafter Department) requests U.S. EPA, Region 5 to approve a water quality standards variance for the above-referenced discharge. The water quality criterion for which the permittee is seeking a variance is contained in ch. NR 105, Wis. Adm. Code.

To assist your staff during their review, relevant background information pertaining to this variance is attached to this letter. The draft permit and variance were publicly noticed on November 29, 2024 and a hearing for the variance was held on January 16, 2025. The comment period has now ended. No public comments were received relating to the proposed variance.

The Department is committed to working with the permittee during the term of this variance to find a solution that will lead toward full compliance with the applicable water quality standard. Conditions on the variance, which are included in the WPDES permit, specify actions to be taken by the permittee and timetables for those actions. If the variance is approved by EPA, the Department will include the variance limitation and related conditions in the final WPDES permit.

The Department appreciates your consideration of this request. Should you have further questions regarding this matter, please contact Victoria Ziegler at 414-391-8946.

Sincerely,

A handwritten signature in black ink, appearing to read 'Joe Van Rossum'.

Joe Van Rossum, Bureau Director
Division of Environmental Management

DATED: 1/27/2025

Attachment

e-cc Nick Lent and Bryan Hartsook, DNR
Tim Elkins – EPA Region 5

BACKGROUND INFORMATION REGARDING WATER QUALITY STANDARDS VARIANCE

Receiving Stream and Classification: **Brighton Creek, Warm water sport fish, non-public water supply**

Criterion: **395 mg/L chronic toxicity criterion in ch. NR 105, Wis. Adm. Code**

Water Quality Based Effluent Limit: **400 mg/L as a weekly average**

Existing Permit Limit: **510 mg/L**

Permit Limit Based on Proposed Variance: **450 mg/L**

Duration of Variance: **Five years - from the effective date of permit reissuance through the proposed permit expiration date of March 31, 2030.**

Department Rationale for Approving Variance:

Section NR 106.83(2), Wis. Adm. Code, outlines findings that justify expediting chloride variances. More specifically:

- a) The Department considers treating these large volumes to produce effluent that reliably meets the water quality-based effluent limit to be prohibitively expensive. See Section VIII of the Facility Specific Standard Variance Data Sheet for clarification.
- b) End-of-pipe wastewater treatment technology for chloride produces concentrated brine that can be as much or more of a liability than the untreated effluent. Since the concentrated brine cannot be further treated, the only recourse for the disposal of the brine is transfer to another community, which is often not feasible.
- c) Appropriate chloride source reduction activities are preferable environmentally to effluent end-of-pipe treatment in most cases, since the end product of treatment (production of concentrated brine) does not remove the load of chloride from the environment.
- d) For some dischargers, attaining the water quality-based effluent limit for chloride may cause substantial and widespread adverse social and economic impacts in the area where the discharge is located.

The Department concludes that the applicant has met the requirements of Subchapter VII of ch. NR 106, Wis. Adm. Code, and s. 283.15, Wis. Stats. The Department further concludes that requiring the applicant to meet the water quality standard for chloride at this time would result in substantial and widespread adverse social and economic impacts. The Department therefore proposes to grant the variance for chloride.

Conditions to be Included in WPDES Permit: **See Draft Permit being sent to EPA in Electronic Format.**

Attachments:

Facility Specific Standard Variance Data Sheet
Certification from DNR General Counsel